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AUTHOR Koeller, Shirley
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ABSTRACT

This paper discusses current studies of economic instruction in early childhood and primary elementary school grades. While it is true that the study of economics has shifted downward to the primary grades, it is unknown exactly how widespread the teaching of economics is at this early level. The few research studies reviewed in this paper use different materials and instructional techniques and vary enormously in quality, scope, design, sample size, population, dependent variables, length of treatment and predictable findings. The newer programs and curriculum materials for the primary grades reported in these studies do offer usable guidelines to follow and are acceptable tools for instruction. However, at the primary level, no program studied provided a "predetermined curriculum map." Areas in need of continued research are the evaluation of short term and long range effects of particular program models in economic education for young children and evaluation of the staffing and training of the teachers of these program models. (Author/RH)

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A Review of the Research In Economics in Early Childhood/ Elementary Education, K-3.

Shirley Koeller
Texas Tech University
College of Education
Lubbock, Texas 79409

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A REVIEW OF THE RESEARCH IN ECONOMICS

IN EARLY CHILDHOOD/ELEMENTARY EDUCATION, K-3

The study of economics in early childhood and the primary elementary school grades has been a topic of interest during this decade of the 1970's, as witnessed by the growing number of state legislatures that are suggesting or mandating its inclusion in these grades. Much of the impetus for this interest has come from the Joint Council on Economic Education and the rapidly growing network of related state and regional centers, which have provided educational leadership in this area by preparing, reviewing, and publicizing relevant content.

This paper discusses the most pertinent of current studies rather than confronting the reader with a comprehensive approach that includes studies having less relevance or value for the classroom teacher of these grade/age levels. A search of the literature in late 1978 revealed a mere handful of such references, making this review, because of the low volume and recency of the research, an uncomplicated task. With only four exceptions, the research in this area has been done since 1961.

The present status of economic education in the primary grades has not been documented. Trujillo (1976) delineated the parameters and content of economics, economic education, and consumer education and noted that most materials are not designated as belonging to economic education or consumer education at the primary level. So, while it is true that the study of economics has shifted downward to the primary grades, it is unknown exactly how widespread the teaching of economics is at this level. Responses from over 100 school systems (Davison, Kilgore, and Sgontz, 1973) indicated that

ten selected textbook series were widely used. In spite of the fact that it cannot be correctly estimated how many young children are receiving some instruction in economics at the primary level, it is probable that economic concepts cannot be avoided because of their pervasiveness in each child's life. This fact in itself accounts for the involvement and interest of eminent scholars in this social-humanistic movement to insure that young children receive adequate early instruction in understanding economic concepts. The question is, then, one of quality and treatment rather than the simple question of exposure to economics versus no exposure in primary classrooms.

This paper focuses on the key questions that have been asked about economics (often referred to as "the dismal science") and the education of young children:

Can economic concepts be taught to young children and, if so, which economic concepts should be selected?

It has been claimed (Kourilsky, 1976) that kindergarten is not too soon to create a population of economically literate citizens, In her program for older children, those in grade 3 and beyond, Kourilsky (1976) states that economic concepts like scarcity, currency, capital, and production develop "naturally" when competitive classroom economics are created. Others (McKenzie, 1969; Sulton, 1967; Larkins and Shaver, 1969; Davison and Kilgore, 1971; Davison, Kilgore, and Sgontz, 1973) have concluded that at least some economic concepts can be learned by young children. How the selection of economic concepts is best made and how understanding of these concepts is best attained are not fully known.

Studies with primary grade children have focused upon concept attainment immediately following treatment rather than upon long-range attitudinal or behavioral characteristics of changes in pupils. Kourilsky (1977) found a

substantial difference between the experimental and control group in her study involving 96 subjects from five kindergartens. Children, from five to six years old, in the experimental treatment, which took place for thirty minutes daily over an entire semester, with trained teachers who had participated in a thirty-hour workship, generally mastered selected economic concepts. She notes that, while kindergarten children found it easier to learn some concepts than others (specialization was hard to comprehend), they did identify, comprehend, and apply to real life situations in their environment economic concepts such as scarcity, supply and demand, and opportunity costs. Indeed, Kourilsky reports that children's economic knowledge (total scores; mastery levels varied in the nine areas tested) after completing her semester-long program was four percentage points higher (72.5%) than the knowledge manifested by the pretest scores of their teachers (68.5%). She writes that:

> Piaget's work typically shows that all problem-solving in the primary grades evolves through trial and error rather than through the internalization of concepts and the rationalization of a logical solution based on those concepts. The Kinder-Economy program tends to present conflicting evidence and shows that the abstract process of decision-making through rationalization is indeed accomplished by five- and six-year-olds. The children were able to understand, use, and analyze the nine economic decision-making concepts covered by the program (p. 184).

Fox (1978) cautions that early education in economics must consist of helping children make sense of what they already know. She states that children begin school with economic attitudes based upon their own direct experience with numerous simple economic activities. She observes that young children are aware of economic concepts such as working, buying, trading, owning, and saving. Her research has noted age-related, qualitative changes in children's understanding of the economic concepts of ownership, pricing, and wealth. Fox cites authors (Strauss, 1952;

Danziger, 1958; Sutton, 1962; Miller and Horn, 1965; Kohlberg, 1969; Darrin, 1958; Burris, 1976) who also propose developmental stages to explain children's understanding of economic concepts. For example, Strauss described nine developmental stages in children's understanding of monetary meaning, while Burris noted the existence of developmental stages in children's understanding of the concepts of commodity, exchange, value, property, class, and work.

Davison and Kilgore's (1971) study involving twenty-four second grade classrooms also found that several questions pertaining to basic economic concepts were missed almost universally, perhaps indicating that these were beyond the maturity level of the developmental stage of most pupils. Subjects participated in a five-week study to determine whether there were significant differences between the control group, consisting of eight classrooms using the regular social studies program, and two experimental groups consisting of eight classrooms using Child's World of Choices and eight classrooms using Child's World of Choices combined with inservice of classroom teachers. There were significant differences between the control and experimental groups but not between the two experimental groups. Significant differences were noted only in the area of information attained and not in the area of reasoning ability.

In a study involving four classrooms, Spears (1967) also found significant differences between the control group using the regular social studies curriculum and the three experimental groups using newer, but different, curriculum programs emphasizing economic concepts. There were no significant differences between the three experimental groups. On the other hand, Jefferds (1966) found no significant differences between two experimental groups using newer curriculum materials emphasizing economic concepts and the control group receiving regular instruction.

Thus, the nature of the relationship between the quality of instruction (trained versus untrained teachers), the quantity of instruction (length and duration of treatment), materials and programs provided, and pupil growth in understanding and reasoning in economic concepts over time remains unclear. Must we consider not only each child's individual differences in experiential background, ability, and interests in order to answer this question, but also the fact that teaching effectiveness and children's ability to comprehend complex economic concepts may depend upon their cognitive developmental level? More information is needed in this area to determine whether children are able to fully and correctly understand selected economic concepts equally well at age five or an older age, or whether cognitive developmental differences exist, implying the need for sequential placement of economic concepts and consideration of the particular method of teaching those concepts.

This suggests another important question: With young children, many of whom cannot read yet, how is the knowledge of abstract economic concepts best measured?

There are problems unique to the testing of young children. Larkins and Shaver (1969) note that the format of the test instruments themselves may be confusing. In addition, young children, they discovered, tend to mark "yes" when they are guessing on a written test. To correct for this, they developed a matched pairs scoring instrument.

Most tests of economic concepts (Robinson, 1963; Spears, 1967; Larkins and Shaver, 1967) for young children have been written to evaluate the effectiveness of particular curriculum materials. There is some question about the reliability and validity of the tests developed in this area. Buros (1974) has not reviewed tests of economic concepts designed for young children. However, the test devised by Davison and Kilgore (1971), the Primary Test for Economic

Understanding (PTEU), because of its wide use and the amount of normative data available, appears to be adequate for measurement in this area. The PTEU, developed for use with second graders who were using Child's World of Choices, has subsequently been used to evaluate other programs and materials covering the same economic concepts. PTEU testing more closely relates to information than to reasoning; little is known concerning the retention and transfer of this information. It is unclear whether acquiring information is equal to full understanding in concept attainment. To better understand the effects of economic education on young children, the area of measurement and program evaluation remains one direction where more needs to be known.

The final question deals with curriculum and instruction: What materials and instructional techniques are available for teaching economics to young children?

Although newer curriculum materials with economic concepts have been written for young children, Davison, Kilgore, and Sgontz (1971) suggest that the most widely used material K-6 remains the Social Studies textbook. An evaluation of current-post 1968 social studies texts (Davison, Kilgore, Sgontz, 1971) judged primary level books, grades 1-3 to be more adequate in developing economic concepts and in systematic treatment of economic content than were the materials for grades 4-6. They recommended that relationships between key concepts be developed, although they seemed satisfied with the continuing sequence of study K-6.

The few research studies reviewed in this paper use different materials and instructional techniques and vary enormously in quality, scope, design, sample size, population, dependent variables, length of treatment, and predictable findings. It is the writer's opinion that the newer programs and

curriculum materials for the primary grades reported in these studies offer usable guidelines to follow and are acceptable tools for instruction. However, at the primary level, no program studied provided for a "predetermined curriculum map" (Symmes, 1972: 44). At this level, it appears that reliance is best placed upon the child's experiential background (e.g. a personal account of what a family is). Senesh (1973) has stressed that fundamental social studies concepts are developed only in relation to a child's own particular experiences. Kourilsky (1976) states that "each particular and consequently, different mini-society evolves in its own unique way, not by design but because children are different" (p. 381). Kourilsky, in fact, has data indicating that where subjects share in the decision-making process in classrooms where self-motivation, creativity, innovation, and participation in structuring of incentives are promoted, children score significantly higher, not only on scores for economic knowledge but also on attitude measures of autonomy and assertiveness.

This may explain why studies (Spears, 1967: Davison and Kilgore, 1971) find some of the newer teaching materials, with or without teacher training, to be equally effective, although there may be differences between the newer teaching resources and regular social studies programs. While findings are not consistent, where teachers are trained, it appears that pupils do learn significantly more (Nappi, 1978; Pravis, 1970; Kourilsky, 1976, 1977; Joint Council on Economic Education, 1974).

There are a growing number of articles dealing with economic education for the primary grades, but the bulk of these are descriptive "how-to" accounts of useful methodology, workable activity suggestions and clever ideas offered by inspired teachers. Usually, these articles contain little empirical data about significant differences in children after treatment.

Areas in need of continued research are in the evaluation of short-term and long-range effects of particular program models in economic education for young children and evaluation of the staffing and training of the teachers of these program models. There is a need to define and understand what distinguishes a successful program, how existing programs might best be improved, and a need to identify successful preservice and inservice instructional programs as well.

Summary

It appears that neither the particular materials, programs, or teachers are alone accounting for the differences in the "learning" of economic content by young children. Rather, children may be profiting intellectually from economic education curriculums that perhaps offer a wide range of experiences that are interpreted in view of their backgrounds and developing cognitive ability. Kohlberg (1969) has concluded that children need wide, general kinds of active experience for adequate development of cognitive ability. Chomsky (1965), in discussing linguistic competence, indicates that children have potential to develop cognitive skills and educational content when they participate in situations that require their expression. Studies reviewed in this paper do not indicate that any single curriculum offers the most effective stimuli. It may be necessary for each staff, utilizing available resources and instructional guides, to develop a dynamic curriculum that meets the needs of their children. In short, it may be that the staff model providing the human involvement of children and their knowledgeable, concerned, and enthusiastic teachers is a key element in the success of economic education programs for young children and is thus as or more important than particular curriculum materials in use. More needs to be known in this area.

Closing on a positive note, economics at the primary level is fast becoming a catch-word. Research in the areas suggested in this paper will continue to provide rationale and guidance for the explosion of emphasis in this important and exciting curriculum area.

References

Bruni, J. V. and H. Silverman "Let's Do It! Introducing Consumer Education." Arithmetic Teacher, 23 (May 1976) 324-331.

Buros, O. K. Tests in Print. Highland Park, N. J.: Gryphon Press, 1974.

Burris, V. L. "The Child's Conception of Economic Relations: A Genetic Approach to the Sociology of Knowledge." Unpublished doctoral dissertation, Princeton University, 1976.

Chomsky, N. Aspects of the Theory of Syntax. Cambridge, Massachusetts: MIT Press, 1965.

Darrin, L. "Economics in the Elementary School Curriculum: A Study of the District of Columbia Laboratory Schools." Unpublished doctoral dissertation, University of Maryland, 1958.

Davison D. and J. Kilgore "A Model for Evaluating the Effectiveness of Economic Education in Primary Grades." Journal of Economic Education, Fall, 1971.

_____ 1968. The Child's World of Choices. Iowa City: University of Iowa.

Davison, D. G., J. H. Kilgore and L. G. Sgontz Economics in Social Studies Textbooks. Joint Council on Economic Education, 1973.

Economic Education Experiences of Enterprising Teachers, Volume 13. A Report Developed from the 1974-1975 Entries in The International Paper Company Foundation Awards Program for the Teaching of Economics. Joint Council on Economic Education, 1976.

Economic Education Experiences of Enterprising Teachers, Volume 14. A Report Developed from the 1975-1976 Entries in The International Paper Company Foundation Awards Program for the Teaching of Economics. Joint Council on Economic Education, 1977.

Economic Education Experiences of Enterprising Teachers, Volume 15. A Report Developed from the 1976-1977 Entries in The International Paper Company Foundation Awards Program for the Teaching of Economics. Joint Council on Economic Education, 1978.

Fox, K. F. A. "What Children Bring to School: The Beginnings of Economic Education." Social Education, October 1978, 478-481.

Govian, R. Education for Economic Competence in Grades I to VI. New York: Teachers College, Columbia University, 1942.

Iowa Council on Economic Education The Child's World of Choices. Phillips Hall, University of Iowa, Iowa City, Iowa 52242, n. d.

Jefferds, W. "A Comparison of Two Methods of Teaching Economics in Grade One." Unpublished doctoral dissertation, University of California at Berkeley, 1966.

Joint Council on Economic Education DEEP 1969, Perspectives on a 5-Year Experiment in Curriculum Change. New York, 1969.

Joint Council on Economic Education An Evaluation of the Sears-Roebuck Foundation Fellowship Program for Elementary School Teachers. New York, 1973.

Kohlberg, L. "Stage and Sequence: The Cognitive-Developmental Approach to Socialization." In D. A. Goslin (Ed.) Handbook of Socialization Theory and Research. Chicago: Rand McNally, 1969.

Kourilsky, M. Beyond Simulation: The Mini-Society Approach to Economics and Other Social Sciences. Los Angeles, California: Educational Research Associates, 1974.

_____ 1977. "The Kinder-Economy: A Case Study of Kindergarten Pupils' Acquisition of Economic Concepts." Elementary School Journal 77 (January 1977) 182-191.

Kourilsky, M. and J. Hirshleifer "Mini-Society vs. Token Economy: An Experimental Comparison of the Effects on Learning and Autonomy of Socially Emergent and Imposed Behavior Modification." Journal of Educational Research, 69, July/August 1976, 376-381.

Larkins, A. G. and Shaver, J. P. "Matched Pairs Scoring Techniques Used on a First-Grade Yes-No Type Economic Achievement Test." Utah Academy of Sciences, Arts, and Letters: Proceedings, 44 (1967), 229-242.

_____ 1969. "Economics Learning in Grade One: The USU Assessment Studies." Social Education, 33 (December 1969) 958-963.

Lewis, D. R., D. Wentworth, R. Reinke, and W. E. Becker Educational Games and Simulations in Economics. Joint Council on Economic Education, 1974.

Lumsden, K. Recent Research in Economics Education. Englewood Cliffs, New Jersey: Prentice-Hall, 1970.

McAllister, A. "Economic Education, A New Horizon." Instructor, 73 January 1964, 15.

McKenzie, R. B. The Economic Literacy of Pupils in the Elementary Grades. Radford College, 1969.

Mattran, G. and W. D. Rader History as an Integrative Discipline. Elementary Economics Project. ERIC ED 058139

Nanassey, L. C. "Education for Business-Economic Concepts in Elementary Schools." Unpublished doctoral dissertation, Teachers College, 1952.

Napp[illegible], Luksetich, and Dawson Learning Economics Through Children's Stories Joint Council on Economic Education, 1978.

Pravis, R. W. Teaching Economics in Elementary Schools: Comparing Program vs. Non-Program Students and the Effect of Teacher Acquaintance with Instructional Materials. ERIC ED 075293.

Rader, W. D. et. al. Results of the Evaluation Study Conducted in the Vigo County Public Schools on the Elementary School Economics Programs. Chicago: Industrial Relations Center, 1967.

Robinson, H. F. "Learning Economic Concepts in the Kindergarten." Unpublished doctoral dissertation, Columbia University, 1963.

Senesh, L. Our Working World. Chicago: Science Research Association, 1973.

Spears, S. "Concept Learning in Economics Under Three Experimental Curricula." Unpublished doctoral dissertation, University of California at Los Angeles, 1967.

Strauss, A. L. "The Development and Transformation of Monetary Meanings in the Child." American Sociological Review, 17, 1952, 275-286.

Sulkin, H. A. and C. R. Friedman Research in Elementary School Economics. Industrial Relations Center, The University of Chicago, 1969, Occasional Papers Number 30.

Sutton, O. R. "Graded Economic Concepts for Use in the Elementary School." Unpublished doctoral dissertation, University of Tennessee, 1967.

Symmes, S. S. "Economic Education Comes of Age." Indiana Social Studies Quarterly, W 1972-1973, 25, 37-49.

Trujillo, G. Consumer and Economic Education K-12: A Comparative Analysis. ERIC ED 147414, September 1976.